Colonel Purdy: Old Dungola to El Facher; upon which the determinations of latitudes and longitudes were made by Lieut.-Colonel Mason.

Lieutenant-Colonel Mason: El Facher to Gebal Medob, and return.

Captain Mahmoud Sami, under the orders of Colonel Purdy: El Facher to El Touecha, and return.

Lieutenant Mahir, under the orders of Major Prout: From El Facher round Gebal Marrah, and return.

W. J. TURNER, R.G.S.

VI.—Zeno's Frislanda is Iceland and not the Færoes. By Admiral Irminger.

[With Map and Diagram.]

Among the voyages of discovery of former times, few have excited more attention among Geographers than the voyages of the Venetian nobles, the brothers Nicolo and Antonio Zeno, to the northern seas, towards the close of the fourteenth century; an account of which was published under the title of 'Dello Scoprimento dell' Isole Frislanda, Eslanda, Engronelanda, Estotilanda, e Icaria, fatto per due fratelli Zeni, M. Nicolò il Cavaliere, e M. Antonio,' with a map, 'Carta da Navegar de Nicolo et Antonio Zeni furono in tramontana lano MCCCLXXX.' The latest edition of this work, including the original and an English translation, with notes and introduction, is that by Mr. R. H. Major, published in 1873 by the Hakluyt Society.

Many eminent scholars and critics have discussed the Zeno narrative; some arriving at the conclusion that it is untrustworthy or even fictitious, and others that it has much merit. Humboldt says: "On y trouve de la candeur et des descriptions détaillées d'objets, dont rien en l'Europe ne pouvoit leur avoir

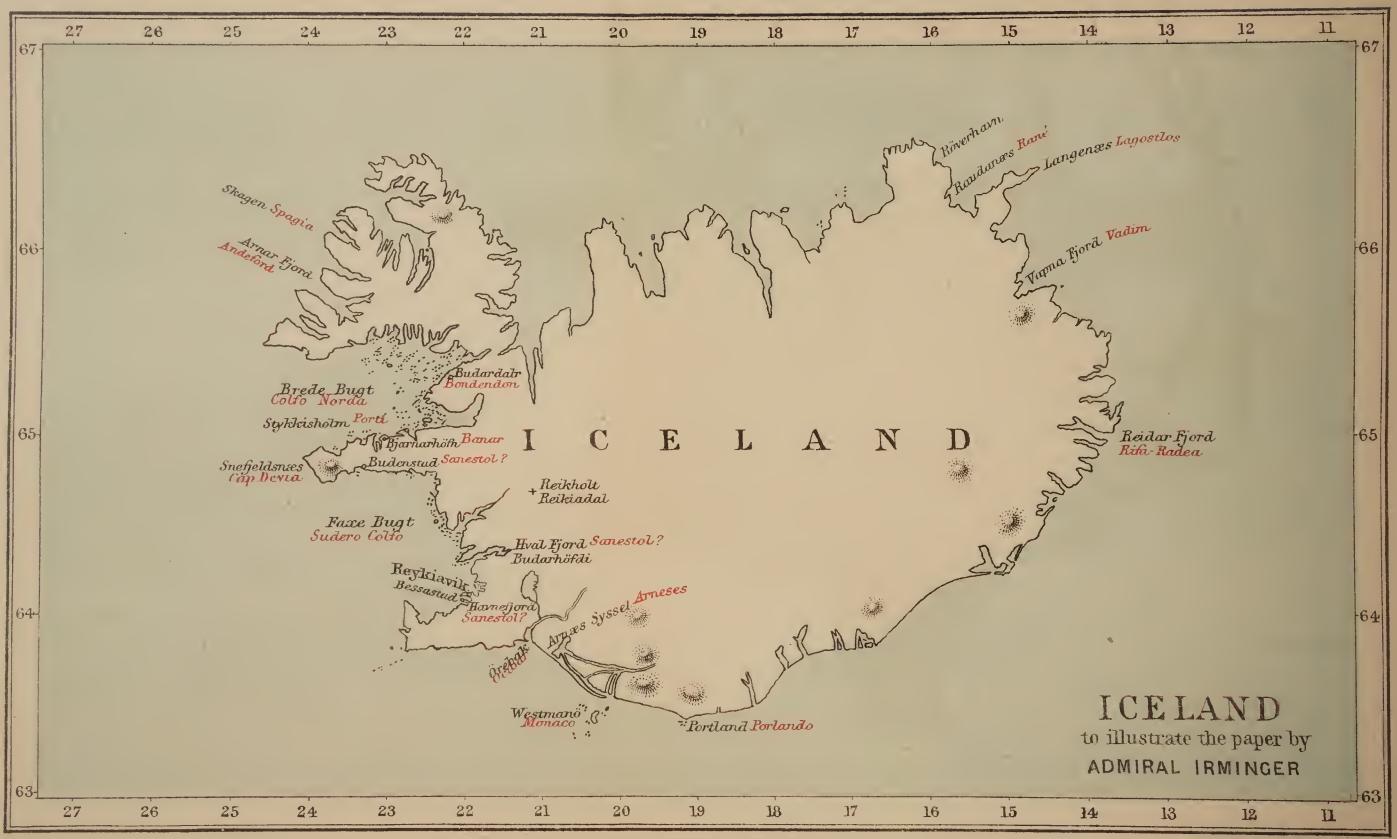
donné l'idée." *

As I have been frequently in those waters, and, besides sailing in the open sea between the islands, have stayed for a long time in Iceland and the Færoe-islands, the old narrative of the Zeni has been from an early date of interest to me, and I have followed the later criticisms of it with constant attention.

Some few years since, I took occasion to inform the eminent geographer, Mr. Clements Markham, that my conception of various points in the Zeno voyage did not agree with that of Mr. Major and Admiral Zahrtmann, especially with regard to their identification of the mystic "Frislanda" with the "Færoe-islands." I now take the liberty of submitting to the

^{*} Hakluyt edition 1873, Introduction, ix.





Royal Geographical Society the grounds on which I differ from the above-named authorities.

I will give, first, my critical annotations to Mr. Major's various statements, and then my individual opinion as to the solution of the question in its entirety, constantly referring to the Hakluyt Society's edition of 1873.

At page 6 we read the following:—

"Zichmni then, being such as I have described him, was a warlike valiant man, and especially famous in naval exploits. Having the year before gained a victory over the King of Norway, who was lord of the island, he, being anxious to win renown by deeds of arms, had come with his men to attempt the conquest of Frislanda, which is an island somewhat larger than Ireland. Whereupon, seeing that Messire Nicolò was a man of judgment, and very experienced in matters both naval and military, he gave him permission to go on board his fleet with all his men, and charged the captain to pay him all respect, and in all things to take advantage of his advice and experience. This fleet of Zichmni consisted of thirteen vessels, whereof two only were rowed with oars, the rest were small barques and one ship. With these they sailed to the westwards, and with little trouble gained possession of Ledovo* and Ilofe† and other small islands in a gulf called Sudero, where, in the harbour of the country called Sanestol,‡ they captured some small barques laden with salt fish. Here they found Zichmni, who came by land with his army, conquering all the country as he went. They stayed here but a little while, and making their course still westwards, they came to the other cape of the gulf, and then turning again, they fell in with certain islands and lands which they brought into possession of Zichmni. This sea, through which they sailed, was in a manner full of shoals and rocks; so that had Messire Nicolò and the Venetian mariners not been their pilots, the whole fleet, in the opinion of all that were in it, would have been lost, so inexperienced were Zichmni's men in comparison with ours, who had been, one might say, born, trained up, and grown old in the art of navigation. Now, the fleet having done as described, the captain, by the advice of Messire Nicolò, determined to go ashore at a place called Bondendon, § to learn what success Zichmni had had in his wars, and there, to their great satisfaction, they heard that he had fought a great battle, and put to flight the army of the enemy; in consequence of which victory, ambassadors were sent from

^{*} Little Dimon.

[§] Norderdahl.

all parts of the island to yield the country up into his hands, taking down their ensigns in every town and village. They decided therefore to stay in that place to await his coming, taking it for granted that he would be there very shortly."

And further, at page 9.

"Departing thence, they went in triumphant manner towards Frislanda,* the chief city of the island, on the south-east of it, lying inside a bay, in which there is such abundance of fish that many ships are laden therewith to supply Flanders, Brittany, England, Scotland, Norway, and Denmark, and by this trade they gather great wealth."

As Zichmni came by land, Sanestal (Major's and Zahrtmann's Sandóe) must have been on the same continuous land as the place from whence he had journeyed thither. The island Sandó, through which I myself have travelled twice from north to south, and am therefore well acquainted with the localities, has indeed a few dwellings at "Sand," around a small bay with anchorage, though open for southern winds, which frequently cause a very heavy sea against the land. On that insignificant spot Zichmni is said to be with his army.† From whence he came is not said, but by land it is not possible to come to that little island.

I may remark as a well-known fact that on the Færoe-islands the preparation of fish with salt (Klipfisk) was not practised before the present century; before that time dried fish without salt (Stokfisk) only was prepared; I will not, however, urge this as a principal and decisive argument.

At page 6:—"This sea through which they sailed from Sanestal to Bondendon was in a manner full of shoals and rocks," &c.

From this place Sanestal, Zichmni, of course, intended to go to the conquest of Frislanda (Major's Færoe-islands), but casting a glance on the chart of the Færoes, and following the line which the fleet with Nicolò Zeno on board is said to have sailed, it perplexes me that the fleet at the outset were not directed to Skaapen, a landing-place on the northern side of Sandó, in order to transport the army to Stromó (Major's Frislanda), for the purpose of conquering it. What, at any rate, had the fleet to do at Bondendon (Mr. Major's and Admiral

^{*} Thorshavn.

[†] According to Mr. Major's edition, 1873. See the route on the Færoe chart.

Zahrtmann's Norderdahl), leaving the army on the little scantily-peopled Sandó, Sanestal not being continuous land with Frislanda? Mr. Major and others may believe that the word "Norderdahl" to a southern ear sounded like "Bondendon;" but this would not justify the fleet's sailing to Norderdahl.

The navigation from Sanestal to Bondendon is, in the Italian narrative, described as perilous through the many shoals and rocks; but this does not agree with the actualities at the Færoeislands; the insignificant distance of 14 to 15 miles, westward of Sandó, passing by the small islands Trolhoved, Hestó, and Kolter, to Norderdahl, being quite clear water. Hestó and Kolter are towering, steep-to, rocky islands surrounded by good Trolhoved is a smaller and lower uninhabited rocky island; but so free from obstacles that you may go so close in shore as to touch the rock with your jib-boom. There is no anchoring-ground, however, in the Sound at Norderdahl; but often a strong current and heaving of the sea, the coast being rocky, steep-to: and on such an exposed place Mr. Major supposes that the fleet had thought fit to wait for Zichmni's arrival. The coast in its whole length, from Norderdahl to the southernmost part of Stromó, is somewhat steep-to and rocky, where no dwellings, except little farms, have ever existed. Norderdahl, Sydredal, Velbastad, Kirkebó, and Bó, where some grass-plots may be found, but only near the houses, just sufficient for the few cattle and sheep, the produce of corn being very small. I have several times passed between Thorshavn and the southern part of the island. The whole southern part, the above-named grassy plots excepted, as well as the inner part of Sandó, exhibit nothing but rocks and sterile stony tracts, and is therefore uninhabitable. Certainly the triumphal march of Zichmni cannot have taken place on the Færoe-islands, from Sanestal to Thorshavn, but must certainly have passed through a larger land-area and with greater population. From Slattaretind on the north side of Osteró, another of the Færoes, about 3000 feet above the level of the sea, the highest point of the island, I have overlooked the whole group, the ocean all around, and the deep Sounds between all those small steep rocky islands; and am convinced that, from whatever high point of any of these islands Zeno might have formed an idea of the extension of the same, as an experienced sailor he would never in his 'Carta da Navegar' have laid down, as he has done, the Færoes as a single island somewhat greater than Ireland.

At pages 25 and 26 we find in Mr. Major's edition:—
"Steering westwards, we discovered some islands subject to VOL. XLIX.

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Frislanda, and passing certain shoals, came to Ledovo,* where we stayed seven days to refresh ourselves and to furnish the fleet with necessaries. Departing thence we arrived on the 1st of July at the island of Ilafe;† and as the wind was full in our favour, we pushed on."

Let us examine that island, Little Dimon, of which I subjoin a sketch. Little Dimon rises steep out of the almost constant heavy seas of the North Atlantic; it is 1299 feet high, and its greatest diameter at the level of the sea is about half a mile (between 3000 and 4000 feet). There is no port, no



anchorage, no lee-side; almost always breakers, more or less, against that almost perpendicular rocky coast; very often, through the strong tide, races whirling round the island, increasing in violence. The island is abordable only at one single point, and this only in calm weather; it is besides so steep-to, that one ought to be accustomed to climb almost perpendicular rocks to get ashore, and no fresh water is to be found. Certainly the fleet stayed not here, at this uninhabitable spot, for refreshment and necessaries, where nothing is found but rock and a little grass.

Ilafe (Mr. Major's Skuó) is larger than Little Dimon and inhabited, but it also is a high rocky island. Ilafe, with Great and Little Dimon, present themselves as lying close to each other, and are, through their little distance respectively from

each other, to be seen distinctly at the same time.

The narrative does not give the time at which the fleet left Ledovo (Little Dimon), but states only that it arrived at Ilafe on the 1st of July. I suppose that the distance from Ledovo to Ilafe must have been greater than from Little Dimon to Skuó, which is only 7 or 8 miles, a distance that may easily be made in an hour.

By the name of Frislanda, then, Zeno cannot have meant the Færoes. So large an island as he described, south of Iceland, indeed never existed. The old Northmen who, many centuries before Zeno, crossed the Northern Atlantic on their voyages to Iceland and Greenland, shaping their course south of Iceland, never mention the great island "Frislanda;" neither on the many voyages between England and Iceland,

before the time of Zeno, had that great land been seen.

John Dee* sets forth that the Franciscan, Nicolaus de Linne, who in 1360 voyaged in the northern seas, and published a book thereon, entitled 'Inventio Fortunata,' set out from the harbour Linne (now King's Lynn in Norfolk), from whence, with ordinary winds, it is fourteen days' sailing to Iceland, which "had bene of many yeeres a very common and usual trade." By Acts of Edward III., 2nd, 5th, and 31st year, the fishermen of Blakey, in Norfolk, were freed from the King's ordinary service, on account of their commerce on Iceland, but no mention is made of Frislanda.

But what island may Zeno have meant to indicate by his "Frislanda"? I believe that an examination of the relations which at that time existed between Europe and the islands of the North Atlantic will show us this.

As neither the fisheries at Newfoundland nor at Lofoden, Norway, were known at that time, and as the Catholic religion was then predominant over all these northern countries, Germany, England, Denmark, Norway, and nearly over the whole of Europe, where in Lent there was a great consumption of fish, of which "stokfisk" (dried fish) was one of the principal supplies, the fish-trade of course was carried on principally in Iceland, whose surrounding waters were renowned for their extraordinary riches in fish. Zeno asserts that in Frislanda there was such abundance of fish, that many ships were laden therewith, to supply Flanders, Brittany, England, Scotland,

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^{* &#}x27;Nordisk Tidsskrift for Oldkyndighed,' 2nd Bind, Kiöbenhavn, 1833, page 26.

Norway, and Denmark; and that great wealth was earned by the trade.

On Martin Boheim's globe, constructed in the year 1492, we read:—"In der Insel Island, fängt man den Stockfisch, den man in unser Land bringt." The trade on Westmanó, south of Iceland, where the sea abounds with fish, appears to have been very considerable. Amongst English merchants there are named, in 1419,—Raflin Tirrington, John Effrardh, Thomas Ladsel, Nicles Wanflit, and Richard Plebel; and amongst their clerks, Robert Bulington, Richard Brillenton, John Wachfield, John Durdley, and Richard Stokeley, most of whom dwelt there and traded throughout the winter.* As to such abundance of fish in these old days in the Færoes, nothing is known.

With regard to this commerce with Iceland, I note from

Icelandic sources the following items: †—

About the year 1400, Englishmen gained an absolute supremacy in the trade on Iceland. They ill-treated the Icelanders, and incredible were the injuries they perpetrated—rapines,

pillage, mutiny, and manslaughter.

In the year 1419 Thorsley Arnesen sailed from Iceland in order to represent to the King of Denmark the calamities brought on the inhabitants by the pillages of foreigners. On the voyage he was surprised by an English vessel, whose assault, however, he repelled, and took refuge first at the Færoes, lastly in Norway.

In 1420 English ships, under John Marris and Rawlin Tirrington, traded on Westmanó, where they robbed nine lasts of

the king's dried fish.

On the coasts of North Iceland, in Skagafiord, the crews from three ships landed in full battle array, with trumpets and flying ensigns. They slew there a royal officer, John Ide, wronged the administrator at Holum in the presence of the

bishop, besides practising robberies and other crimes.

In 1424 the English seized and plundered for the fourth time Bessestad (then the residence of the bailiff), near Reikiavik, carried away, among other goods, six lasts of dried fish, slew one Anders Olsen, and wounded and seized many others of the king's men, &c. &c. The ringleaders named are John Percy, John Pasdal, and Thomas Dale. On one or more adjacent islands the English had places of refuge, surrounded with entrenchments. Westmanó was ravaged repeatedly; a quasi peace was concluded, but soon broken. The English pursued the royal officers even on the main land. Near the church of

^{* &#}x27;Nordisk Tidsskrift for Oldkyndighed,' 2nd Bind, 1833, page 138. † Ibid., Finn Magnusen, 'Om de Engelskes Wandel paa Island.'

Saurbay, on the southerland of Iceland, they carried away with

them some horses, arms, swords, &c.

In 1425 the English continued their hostilities under the leadership of Percy. On Westmanó they seized the royal commanders Hanne Poulsen and Balthasar van Damme, whom they carried away with them as prisoners to England, &c.

In one of the preceding years the pirates burnt down the church on Risó and Husevig on the northland of Iceland, likewise the church on Primsó, carrying away a multitude of cattle and sheep; even many persons, grown men and children, as

prisoners.

But enough of the injuries perpetrated by foreigners in Iceland. I must not omit, however, to note that in the year 1394 a somewhat significant skirmish took place at Budarhófdi,* one of the oldest commercial places in the inner part of Hvalfiord (Faxebay), between the inhabitants and foreign sailors, as this perhaps is about the date of the expedition of Zichmni to Frislanda recorded in Zeno's Italian narrative. I may note, further, that in order to prevent the atrocities of foreigners in Iceland, Queen Margaret of Denmark in 1389 prohibited all foreigners from trading in Iceland and Greenland, although many Icelandic records prove how powerless those prohibitions were against the overmatching crowd of foreigners, with the piracy and violence which were often intermingled with peaceable commerce. The Danish king, Eric the Pommeran, had, before 1411, issued a decree strictly prohibiting all commerce in Iceland with English seamen other than those with whom it was customary to trade; and an English merchant, Richard, at the Westfiord in Iceland, presented the king's sea-passport and thereby was admitted to trade; but at the same time English fishermen, especially from Lenne (Lynn), London, Fernemouth (Yarmouth), and others, pillaged on various parts of the coast.

In the year 1413 thirty English fishing-vessels are enumerated as being in Iceland; besides English merchant-vessels, amongst which five to Westmanó; in the year 1415 six English merchant-vessels were in Havnefiord, one of which was freighted for the king's feoffee of Iceland, Vigfus Iversen Halm, who, with sixty lasts of dried fish and a quantity of silver money, sailed

to England.

On Maundy-Thursday, 13th of April, 1419, in a horrible hurricane, with showers of snow, lasting only three hours, not less than 25 English fishing-vessels were wrecked at Iceland, the cargoes and wrecks covering the coasts; all the crews, however, were drowned in the waves.

^{*} Budarhófdi is now a commercial place, laid down many years ago.

Nowhere in the annals and records of Iceland does the name

of Frislanda occur, or is even hinted at.

Evidently the expedition (assault and pillage) of Zichmni on Frislanda, as described by the Zeni, fits remarkably well as one of the cases of piratical assaults above enumerated as committed in Iceland by foreigners—it fits both in respect to date and to the character of the attack. The position with respect to latitude and longitude is obvious: "Estland" (Shetland), laid down close to Norway, a long island between $67\frac{1}{4}$ ° and $70\frac{1}{2}$ ° of latitude, named "Islanda," has not the least conformity with Iceland; a multitude of islands laid down on the north-east side thereof do not exist, but have got names which point to Shetland; the configuration and position of Islanda are unjust to such a degree that, though the Latin names of Skalholt and Holum be found in the 'Carta,' we may, with surety, suppose that Zeno has traced the same after some loose account, which may be supposed to be the case with many other non-existent lands in his 'Carta.'

Malte-Brun's assertion (Major's Introduction, xxxviii) in his 'Précis de la Géographie universelle,' that Islanda "est bonne à l'exception de la partie Nord-Ouest," I cannot agree to. The 'Carta' itself furnishes, nevertheless, a clue to the solution of

the question.

It is evident that "Frisland" in Zeno's 'Carta' has a great resemblance to Iceland, and is traced more accurately than the other lands in the 'Carta' as an island "somewhat larger than Ireland." Considering the poor material appliances in Zeno's time, especially the want of instruments, for laying down approximately true the whole configuration of a land, it is wonderful to what degree "Frisland" resembles the actual Iceland.

At that time the general amount of knowledge regarding Iceland was not insignificant, and Zeno, as a well-informed man, had certainly communicated with cultivated Icelanders, from whom he probably had the tracing.

The island "Islanda" laid down in the 'Carta,' a long way northward, is not to be regarded—the tracing showing itself as uncertain as that of Icaria, and many other non-existent

places.

In a sea-chart on so small a scale as Zeno's, stretching from Europe to Greenland, Zeno would certainly not have laid down such an insignificant shoal as Sumbó-Munk (south of Færoe), placing it south of Frisland. Supposing Zeno's "Monaco" to be Westmanó, south of Iceland, at that time renowned for its extensive fish trade, and as its position south of Iceland, with its adjoining smaller islands, is pretty correct, then I do not hesitate to assert that Zeno may have intended by Frisland to signify

Iceland; meeting as we further do, on Iceland near the Westmanó, with Portland (Porlando); the trading-place Orebak (Ocibar), and Arnes-syssel (Aneses), discovering Suderó Colfo (the southern gulf), as Faxebugt and Colfo Norda (the northern gulf), as Bredebugt. Banar as Biarnar-hófn (on a chart of Iceland by Erichsen, dated 1780), a harbour situated between Cap Devia and Porti (harbours). Porti corresponds with Stykkisholm with a safe harbour, known and frequented in old times, within smaller rocky islands and shoals; from the neighbourhood of which harbour the greatest part of the most renowned discoverers of Greenland and America set out from Iceland, therefore probably calling the place "Porti" (harbours). Farther northwards we meet "Bondendon" as Budardalr, Andefort as Arnarfiod, Spagia as Skagen. Rané corresponds with Randanæs; on the western side is situated the well-known Roverhavn (Robber-harbour); Lagostlos as Lengenæs; Vadim as Vapna-Fiord; Rifu-Radea as Reidar-Fiord.*

And now let us examine the Italian narrative, supposing "Frislanda" to be Iceland and its neighbourhood, and inserting

the Icelandic places in the text.

In the Hakluyt Society's Edition, at page 7, we read:—

"Here (in Sanestal) they found Zichmni, who came by land with his army, conquering all the country as he went. They stayed here but a little while, and making their course still westwards, they came to the other cape of the gulf, and then turning again they fell in with certain islands and lands which they brought into possession of Zichmni. This sea through which they sailed was, in a manner, full of shoals and rocks; so that had Messire Nicolò and the Venetian mariners not been their pilots, the whole fleet, in the opinion of all that were in it, would have been lost, so inexperienced were Zichmni's men in comparison with ours, who had been, one might say, born, trained up, and grown old in the art of navigation. Now the fleet having done as described, the captain, by the advice of Messire Nicolò, determined to go ashore at a place called Bondenden, to learn what success Zichmni had had in his wars, and there, to their great satisfaction, they heard that he had fought a great battle and put to flight the army of the enemy," &c. &c.

The harbour "Sanestal" we place at the southern gulf (Suderó Colfo), Faxebugten. The position corresponds nearest with the actual trading-place, Budenstad, with its harbour. On the south side of Suderó Colfo lies Havnefiord, which, in olden

times, had a large trade.

^{*} Cf. the accompanying Map of Iceland.

If by "Sanestal" is not meant one of those places, probably it may signify the former trading-place, Budarhófdi, in Hvalfiord, where, as related in the Icelandic annals, in the year 1394 a battle was fought between the inhabitants and foreigners or adventurers. The voyage from one of those places in the southern gulf, to Bondendon (Budardalr), in Colfo Norda, corresponds much better with the Italian narrative, than the

voyage between the Færoe-islands, as before mentioned.

Having, during my long residence in different years in Iceland, travelled through the country, and therefore knowing the localities, I at first supposed in reading the Zeno narrative of the sailing from "Sanestal" to "Bondendon," that it aimed at a voyage from the actual Faxebugt (Suderó Colfo), Icelandic "Sudr," into the actual Bredebugt (Colfo Norda)—Icelandic "Nordr"—where, in the inner part, we meet with many small rocky islands and ridges, which, as navigators at that time were not furnished with authentic charts, would make the navigation very troublesome and perilous. The course out of Suderó Colfo (southern gulf) is westwards, as stated in the Italian narrative, and in order to get into Colfo Norda (northern gulf), Snefieldsnæs (Zeno's Cap Devia) must be passed. The peninsula which separates Faxebugt from Bredebugt is about 2000 feet high, ending in the western cape with Snefieldsjókul, about 5000 feet above the level of the sea, showing itself over the whole Faxe- and Brede-bugt, with its eternal ice and snow. masses covering about two-thirds of the height of the jókul, and, because of its height, looming rather nearer than it actually is. Of course they had to make a long roundabout from the inner part of Faxebugt, to get into the inner part—filled with many rocks and shoals—Bredebugt, where Budardalr (Bondendon) is situated, and thus it is significant that Zeno has named the western cape (Cape Snefieldsnæs) "Cap Devia," i.e. in Italian, "out of the way."

When Zichmni came to Sanestal, where the fleet met him, it is not dated in the Italian narrative, nor is it evident whither

he went in Frislanda, leaving the fleet at Bondendon.

He may perhaps firstly have landed on the southern coast of Iceland, near to Westmanó, meeting the fleet at Havnefiord, Budenstad, or Hvalfiord, which may thus correspond with the Icelandic relation of the skirmish in that fiord at Budarhófdi in the year 1394, thence, or from one of the other named places, Havnefiord or Budenstad, he has perhaps continued his triumphant march through the country to Budardalr (Bondendon), where he met the fleet. That part of Iceland is the best peopled, and this route corresponds much better with the Italian narrative than the triumphant march through the almost unin-

habited and insignificant districts of the Færoes from Sandó to Thorshavn.

As to the position of the islands Ledovo and Ilafe, mentioned in the Italian narrative, and that of many other there-named places, I do not know where to lay them down, and feel compelled to seek the cause of that inexplicability in the fact that not till 1558, about 150 years after the death of the two brethren Nicolò and Antonio Zeno, the voyages in the north were edited by one of their descendants, their 'Carta da Navegar' having been partly destroyed before.

Still I believe I have proved clearly, in the foregoing remarks, that "Ledovo" was not "Little Dimon;" it being impossible for a fleet in such a little uninhabited spot "to stay seven days to refresh ourselves and to furnish the fleet with

necessaries."

I have now reached the end of my objections to the views of Mr. Major and Admiral Zahrtmann, respecting the mystic island, "Frislanda," of the Venetian brothers Zeno, and have given my own individual opinion in the matter. I will now touch on a few other obscure points or rather uncertainties we meet with in Zeno's narrative.

In Mr. Major's edition, at page 12, we read as follows:—

"Accordingly he fitted out three small barks in the month of July, and sailing towards the north arrived in Engroneland. Here he found a monastery of the order of Friars Preachers, and a church dedicated to St. Thomas, hard by a hill, which vomited fire like Vesuvius and Etna. There is a spring of hot water there, with which they heat both the church and the monastery, and the chambers of the Friars, and the water comes up into the kitchen so boiling hot, that they use no other fire to dress their victuals."

And further on, at page 31: "To the harbour we gave the name of Trin, and the headland which stretched out into the sea, we called 'Capo de Trin.'"

Mr. Major, in his Introduction, page lxxxv.:—

"When Sinclair reached Greenland after his adventure off Iceland, he entered a harbour, from which Antonio says, we saw in the distance a great mountain that poured forth smoke." The harbour they called Trin, and whether rightly or wrongly, that is to say, whether so standing in the old map or inserted haphazard by Nicolò Zeno, junior, the promontory of Trin is placed at the extreme south point of Greenland," &c.

Further: Introduction, page lxxxiv.:

"But the monastery was not only near a lake according to Ivar Bardsen, but according to Zeno it was near a hill which vomited fire like Vesuvius and Etna, and whether it be an extinct volcano or not, there is on the Danish map in a position corresponding with that fixed by Rafn, a hill named 'Suikarssuak.'"

As Mr. Major, in his chart accompanying the above Introduction, has laid down the above-mentioned monastery and the hill "Suikarssuak" in Tessermint-flord, I spoke with Mr. Steenstrup concerning the Zenonian narrative before he left Copenhagen, when he in 1876 was sent out by the Danish Government on a voyage of discovery to South Greenland. I give here an extract of Mr. Steenstrup's notice thereon, addressed to the Government, concerning his examination of Tessermint-fiord, by which it comes to light that the hill "Suikärssuak" cannot have been either an extinct or any other kind of volcano. "I determined," Mr. Steenstrup says, "in the first half of September to examine a place on the island Sermesok, where it was supposed that Kryolith was to be found, partly in order to examine the ice near Cape Farewell, partly in order to visit Tessermintfiord, induced thereto by the comments in a paper published in the 'Journal of the Royal Geographical Society' for 1873, of Mr. Major, to the voyages of Zeno. On the way we visited the hot springs on the island Unartok (before frequently de-Having changed boats at Nennartalik we pushed into the fiord Tessermint, passing the beautiful rock 'Suikärssuak,' which according to the Zenonian narrative should have been an extinct volcano, but such is not the case. Suikärssuak is a mighty granite rock, about 1300 mètres high, which by its compactness differs from all the other scattered summits forming the coast of the inner parts of the fiord. 'Suikärssuak' signifying the 'great,' solid, uncloven (rock).

"Another rock, 'Kuingingek,' opposite to Nennartalik, on the southern side of Tessermint, might perhaps throw some light on the veracity of the Zenonian 'Carta.' A cape is laid down in the south part of Greenland, and named 'Trin-prom.' and in the text 'Capo di Trin,' which name Mr. Bredsdorff, in his treatise on those voyages, conjectures may be derived from Icelandic 'druni,' Danish 'Tryne'—trunk, snout, proboscis, 'Kuingingek' even signifying a trunk or a snout of a swine, with which the rock seems to have some likeness."

From all these facts we cannot admit that Zeno had been in Greenland, and surveyed and laid down in his 'Carta' the coasts, &c. The tracing of the land is not at all difficult, and it is not to be wondered at that the southland of Greenland is laid 6° too northerly-the position of the greatest part of the lands in his 'Carta' being even more incorrectly laid down than Greenland. But even if he had been there, the examination and tracing of a coast so extended, exposed to such troubles and hindrances, would have required such a length of time, that we may safely conclude that the charting of Greenland has not been the work of Zeno only and solely. He may have received his knowledge of Greenland from Icelanders, who at that time—300 or 400 years before Zeno—had maintained a lively commerce with Greenland, where many Icelanders had found a home, built churches, &c. From Icelandic tales he also might have learnt that the fishing-boats of the Greenlanders ("kajaks") were made like a "weaver's shuttle."

We may safely assert that volcanoes never existed in South Greenland. Nobody, Zeno excepted, ever mentioned the like; and all his account of fire-vomiting hills on Greenland, and the heating of the monastery and private dwellings by springs of hot water, may refer to Iceland, where volcanoes are found, and hot springs frequently met with, which in many places are used to dress victuals, and could be made use of to a greater extent in heating dwellings, &c. &c.—which probably may have been the case in olden times.

I may remark that in my voyages to Iceland I have twice—in 1826 and 1834—visited Reikholt, the dwelling of the renowned historian Snorre Sturleson, born 1178, and killed by his son-in-law, Gissur Thorvaldsen, 1241, who had built near his seat a basin of great stones for bathing, to which the water was led from a hot-water spring in the neighbourhood; the cold water being led thereto from a brook, that he might give the bath the wished-for temperature. The basin was of such solidity that in 1826 and 1834, after a lapse of about 600 years, I found it as perfect and fit for use (the very spring still existing) as if it had been built up in recent times. I was told that it was scarcely ever made use of; a circumstance which proves that Snorre Sturleson appreciated bathing higher than his successors.

In Reikiadal I have seen small craters, of only a few feet diameter, where the hot water nearly filled the crater to the very brim, used for dressing the victuals; the kitchen-pots being hung between two iron bars over the crater, and sunk in it, the victuals in the pots thus in a short time being heated to the same temperature as the boiling water in the crater. Further, I visited a bathing-place in the neighbourhood of the dwelling of an Icelander, Ion Jonsson, in Reikiadal, contrived by means of various small craters full of hot water—great flat stones making the floor of a hut thatched with turf, like the common Icelandic dwellings. The patients entered the hut where the heated stones produced a great heat—those suffering from the gout placing themselves, enveloped in woollen covers, a longer

or shorter time on the heated floor. As no cold water was to be found in the neighbourhood, the water from the hot springs was led to a basin somewhat distant, where it was cooled.

Coffee cooked with the water had no bad taste whatever, and

cattle drinking the water thrived very well.

Zeno had without doubt heard of similar places in Iceland;

certainly never in Greenland.

It is to be regretted that the original narrative of Nicolò and Antonio Zeno has not descended to posterity in its integrity as penned by themselves, as it would certainly in that case have been a more precious geographical document than it is in its present state. Zeno the younger, the editor, himself confesses that he, when a child, had torn many of the letters in pieces, and that the 'Carta,' when it was edited, was rotten with age.

VII.—Zeno's Frislanda is not Iceland, but the Færoes; an Answer to Admiral Irminger. By R. H. Major, f.s.a., Secretary, r.g.s.

It was truly said by the learned John Pinkerton, in his 'History of Scotland' (vol. i. page 261, note), "that Zeno's book is one of the most puzzling in the whole circle of literature." In my edition of that book in 1873 I believed, and still believe, that I had solved all the puzzles therein contained. This belief is based upon the fact that I had demonstrated by the geography of to-day that the Frislanda of the Zeno was the Færoe Islands; and that by the happy discovery of a passage in Torfæus, to the effect that "in the year 1391 the Earl of Orkney slew Malise Sperre (his Norse rival to the earldom) in Shetland with seven others," had been able to correct the date of the map from 1380 to 1390, and, in so doing, to bring the dramatis personæ and events described into perfect historical harmony, both as to time and place. Of these two main points the former is the only one to which we are now called upon to direct our attention. I also took great pains to bring into prominent light two stumbling-blocks, over one or other or both of which all my predecessors had tripped, and consequently failed. They are both of them absolutely and unavoidably necessary to be borne in mind if the Zeno book is to be duly criticised, but both one and the other are essentially obnoxious to severely matter-of-fact minds. The first is, the non-recognition of the reality that when proper names are written down